**DEPARTMENT OF INFORMATION TECHNOLOGY**

**B.E (IT - A) IV – SEM**

**Academic Year: 2017-18**

**SCRIPTING LANGUAGES (PC 403 IT)**

**QUESTION BANK**

**Unit I:**

1. Define scripting language. What are different types of Scripting Languages?
2. Write an essay detailing the history of scripting laguages
3. Explain the uses, characteristics, advantages and disadvantages of scripting languages in detail.
4. Explain in detail how scripting languages can be used to improve the functionality of web pages.
5. Differentiate in detail between scripting languages and non-scripting languages.
6. Differentiate between server-side and client-side scripting languages
7. Explain two-tier and three-tier architectures of web-development
8. Write an essay on scripting languages and technologies for mobile application development
9. Explain in detail about usage of scripting languages for research in Data Mining.
10. Give an analysis of scripting languages for research in applied computing.

**Unit II:**

1. Explain different data types in Python with examples.
2. List the various operators supported in Python.
3. What is type conversion? Explain the need for type conversion with the help of relevant examples.
4. What is implicit conversion? Give an example. Write a program to perform implicit conversion. Write a program to perform explicit conversion.
5. Illustrate the differences between Python 2.x and Python 3.x versions with the help of examples.
6. Write a program that prompts users to enter two integers x and y. The program then calculates and x to the power y.
7. Write a program to perform string concatenation.
8. Write a program to read a character in uppercase and then print it in lowercase.
9. Write a program to swap two numbers using a temporary variable.
10. Explain the process of setting up the Python execution and running environment
11. List the rules for naming identifiers in python
12. Explain the different types of comments (single, double and triple quotes) in Python with the help of examples

**Unit III:**

1. Explain the syntax of if, if-else and if-elif statements with examples
2. Explain the utility of *break* and continue statements with the help of examples
3. Explain the utility of pass and else statement in loop with the help of examples
4. Explain the syntax of *for* loop. Differentiate between counter-controlled loops and sentinel-controlled loops.
5. When should we use nested *if* statements. Illustrate your answer with the help of an example.
6. With the help of an example, explain the utility of range().
7. Write a program to make a simple calculator.
8. Write a program to print the calendar of any given year.
9. Explain the syntax of print and input functions
10. List the format specifiers that can be used with %s operator in print function
11. Write a program to read a 5 digit number and then display the number in the following formats… for example, if the user entered 12345, the result should be

1

12

123

1234

12345

**Unit IV:**

1. Define docstring. Show how a docstring is accessed using the \_\_doc\_\_ attribute with the help of an example
2. What are the modules? How do you use them in your programs?
3. Define List. State the syntax for creating a list. Enumerate list operations.
4. Define Set. Explain in detail the various set operations. Write about built-in functions and packages
5. Differentiate between list and tuple.
6. What is a dictionary? Explain the following operations on dictionary with the help of examples: creating a dictionary, accessing values, modifying values, deleting items.
7. What is meant by variable scope and lifetime with respect to local and global variables?
8. Demonstrate variable-length arguments with the help of an example.
9. Define Tuple. Briefly describe the differences between tuple and list. Discuss the operations on tuples.
10. Define List. Explain in detail the various list operations.
11. Define string. List and explain the various string operations.
12. Explain the concept of scope and lifetime of a variable, with the help of programming examples.
13. Differentiate between local and global variables.
14. Define and explain with the help of examples:

* Required arguments
* Keyword arguments
* Default arguments
* Variable-length arguments

1. Write a program that generates a set of prime numbers and another set of odd numbers. Demonstrate the result of union, intersection, difference and symmetric difference on these sets.
2. Write a program that stores a given sparse matrix as a dictionary
3. Write a program to implement the sine series. The program should contain functions for factorial and exponentiation.

**Unit V:**

1. What is a file? Differentiate between absolute path and relative path. Explain the syntax and use of open() function.
2. Explain the use of the following file object methods along with their syntax:

write, writelines, read, readline, tell, seek, with statement.

1. Explain the rename() and remove() functions with the help of programming examples.
2. What are different access modes in which you can open a file?
3. Describe file object attributes and demonstrate them with the help of an example.
4. Describe the usage of “with” statement for opening file with the help of an example.
5. Discuss the directory methods present in the os module.
6. Write a program which counts and displays number of characters in a given file
7. Write a program that copies contents of one file into another file.
8. Write a program that reads data from a file and calculates the percentage of vowels and consonants in the file
9. Write a program to read data from a HTML form and store it in a file